

WHAT IS CLAIMED IS:

1. A method of inspecting a curved shape, comprising:
  - a step of irradiating a surface of an object to be inspected with light from a patterned light source;
  - 5 a step of picking up an image of the object to be inspected;
  - a step of analyzing the image to extract a reflected image of the light source; and
  - a step of performing a good/defective judgment of the
  - 10 shape of the object to be inspected based on the result of comparing data regarding the extracted reflected image with data regarding the reflected image from a good product which is registered in advance.
2. The method of inspecting a curved shape according to
- 15 Claim 1, comprising:
  - a step of irradiating a surface of an object to be inspected with light from a patterned light source;
  - a step of picking up an image of the object to be inspected;
  - 20 a step of analyzing the image to extract a reflected image of the light source;
  - a step of calculating the position of the reflected image of the light source in a horizontal plane;
  - a step of comparing the calculated position with the
  - 25 position regarding a good product which is registered in advance; and
  - a step of performing a good/defective judgment of the

shape of the object to be inspected based on the result of the comparison.

3. The method of inspecting a curved shape according to Claim 1, comprising:

- 5       a step of irradiating a surface of an object to be inspected with light from a pattered light source;
- a step of picking up an image of the object to be inspected; and
- a step of analyzing the image to extract a reflected
- 10   image of the light source;
- a step of calculating the position of the reflected image of the light source;
- a step of calculating the gradient of the object to be inspected based on the position of the reflected image
- 15   of the light source; and
- a step of performing a good/defective judgment of the shape of the object to be inspected based on the result of comparing reference gradient data which is prepared in advance, with the obtained gradient of the surface of the
- 20   object to be inspected.

4. The method of inspecting a curved shape according to Claim 1, comprising:

- a step of irradiating a surface of an object to be inspected with light from a pattered light source;
- 25       a step of picking up an image of the object to be inspected;
- a step of analyzing the image to extract a reflected

image of the light source;

a step of calculating the position of the reflected image of the light source;

a step of calculating the height distribution of the surface of the object to be inspected based on the position of the reflected image of the light source; and

a step of performing a good/defective judgment of the shape of the object to be inspected based on the result of comparing reference height distribution data which is prepared in advance, with the calculated height distribution of the surface of the object to be inspected.

5. The method of inspecting a curved shape according to Claim 4, wherein the height distribution is a sum of the difference between adjacent reflected images along a predetermined axis direction.

6. The method of inspecting a curved shape according to Claim 1, wherein the object to be inspected is a curved glass sheet to be employed as a window glass of automobiles.

7. An apparatus for inspecting a curved shape, comprising:

a light source for irradiating a surface of an object to be inspected with patterned light;

a camera for picking up an image of the object to be inspected; and

a controller for analyzing the image to extract a reflected image of the light source and performing a

good/defective judgment of the shape of the object to be inspected based on the result of comparing data regarding to the extracted reflected image with data regarding to the reflected image from a good product which is

5 registered in advance.

8. The apparatus for inspecting a curved shape according to Claim 7, comprising:

a light source for irradiating a surface of an object to be inspected with patterned light;

10 a camera for picking up an image of the object to be inspected; and

a controller for analyzing the image to extract a reflected image of the light source, calculating the position of the reflected image of the light source in a horizontal plane, comparing the calculated position with  
15 the position regarding a good product which is registered in advance, and performing a good/defective judgment of the shape of the object to be inspected based on the result.

20 9. The apparatus for inspecting a curved shape according to Claim 7, comprising:

a light source for irradiating a surface of an object to be inspected with patterned light;

a camera for picking up an image of the object to be  
25 inspected; and

a controller for analyzing the image to extract a reflected image of the light source, calculating the

position of the reflected image of the light source, calculating the gradient of the surface of the object to be inspected based on the position of the reflected image of the light source, and performing a good/defective

5 judgment of the shape of the object to be inspected based on the result of comparing reference gradient data which is prepared in advance, with the calculated gradient of the surface of the object to be inspected.

10 10. The apparatus for inspecting a curved shape according to Claim 7, comprising:

a light source for irradiating a surface of an object to be inspected with patterned light;

a camera for picking up an image of the object to be inspected; and

15 a controller for analyzing the image to extract a reflected image of the light source, calculating the position of the reflected image of the light source, calculating the height distribution of the surface of the object to be inspected based on the position of the  
20 reflected image of the light source, and performing a good/defective judgment of the shape of the object to be inspected based on the result of comparing reference height distribution data which is prepared in advance, with the calculated height distribution of the surface of  
25 the object to be inspected.

11. The apparatus for inspecting a curved shape according to Claim 10, wherein the height distribution is a sum of

the difference between adjacent reflected images along a predetermined axis direction.

12. The apparatus for inspecting a curved shape according to Claim 7, wherein the object to be inspected is a
- 5 curved glass sheet to be employed as a window glass of automobiles.